

INR 3303 — Practice Exercises  
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For problems 1-6, circle all dominant strategies and Nash equilibria. Payoffs are given in the order of (Row, Column), where 1 = best and 4 = worst.

Hint: Remember, you can find Nash equilibria: first, by looking for dominant strategy equilibria; or, second, by looking to see if either player would change strategy for each outcome.

Example:

		Silent	Talk
Silent		2,2	4,1
Talk		1,4	3,3

1 = best  
4 = worst

Talk is a dominant strategy for each side.  
3,3 is the only Nash equilibrium.

1.

		<u>Column</u>	
		H	T
<u>Row</u>	H	1,2	3,4
	T	2,3	4,1

2.

		<u>Column</u>	
		H	T
<u>Row</u>	H	1,3	4,2
	T	3,4	2,1

3.

		<u>Column</u>	
		H	T
<u>Row</u>	H	2,1	4,4
	T	3,3	1,2

4.

		<u>Column</u>	
		H	T
<u>Row</u>	H	2,2	4,1
	T	1,4	3,3

5.

		<u>Column</u>	
		H	T
<u>Row</u>	H	1,3	4,2
	T	2,1	3,4

6.

		<u>Column</u>	
		H	T
<u>Row</u>	H	1,1	4,2
	T	2,4	3,3

For problems 7-10, cross off all inferior strategies and circle all Nash equilibria. Payoffs are given *cardinally* in the order of (Row, Column); think of the amounts as dollars — so, a *higher* number is better.

7.

		<u>Column</u>	
		H	T
<u>Row</u>	H	15,8	5,5
	T	10,20	20,15

8.

		<u>Column</u>	
		H	T
<u>Row</u>	H	5,-5	-5,5
	T	-5,5	5,-5

9.

		<u>Column</u>		
		X	Y	Z
<u>Row</u>	A	10,2	5,8	2,2
	B	2,0	0,4	10,7
	C	3,10	3,4	5,10

10.

		<u>Column</u>		
		X	Y	Z
<u>Row</u>	A	2,1	1,0	-1,2
	B	0,2	2,1	0,0
	C	1,0	0,-2	1,1
	D	1,-2	0,2	-1,0